

INTISARI

Penelitian tentang penggunaan amilum pregelatin biji nangka sebagai bahan pengisi-pengikat tablet kempa langsung acetosal telah dilakukan, dengan tujuan mengetahui kemampuan amilum pregelatin biji nangka sebagai bahan pengisi-pengikat tablet kempa langsung acetosal.

Penelitian ini termasuk jenis eksperimental murni, menggunakan amilum pregelatin biji nangka berukuran 16, 20, 30, 40 *mesh* sebagai bahan pengisi-pengikat tablet acetosal. Uji-uji yang dilakukan meliputi uji kualitas amilum pregelatin, antara lain: sudut diam, pengetapan, kompaktibilitas, densitas serbuk dan uji kualitas tablet, antara lain: keseragaman bobot, kekerasan, kerapuhan, waktu hancur. Data diuji secara teoritis berdasarkan parameter yang berlaku dan statistik dengan *ANOVA* satu arah, jika berbeda bermakna dilanjutkan uji *scheffe* dengan taraf kepercayaan 95%..

Hasil penelitian menunjukkan bahwa amilum pregelatin biji nangka mempunyai sudut diam lebih besar, indeks pengetapan, kadar air, kompaktibilitas lebih kecil dan densitasnya relatif sama dibandingkan amilum alaminya. Semakin besar ukuran partikel, sudut diam; densitas dan kompaktibilitasnya semakin besar, indeks pengetapannya semakin kecil secara bermakna dan menghasilkan tablet acetosal yang semakin seragam bobotnya, keras dan lama waktu hancurnya. Namun, amilum pregelatin biji nangka berukuran 16, 20, 30, 40 *mesh* tidak dapat digunakan sebagai bahan pengisi-pengikat tablet acetosal dengan sifat fisik tablet yang baik.

Kata kunci : amilum pregelatin, ukuran partikel, bahan pengisi-pengikat, tablet kempa langsung.

ABSTRACT

The research of the jackfruit seed pregelatinized starch as the filler-binder for acetosal direct compression tablet had been done. The aim of the research was to observe the capability of the jackfruit seed pregelatinized starch as the filler-binder for acetosal direct compression tablet.

The research was conducted based on pure experimental design. The pregelatinized jack fruit starch with the size number 16, 20, 30, and 40 mesh were used as the filler-binder for acetosal tablet. The jackfruit seed pregelatinized starch was tested for the reposed angle, tapping index, compactibility, granule density and the tablets were tested for their weight uniformity, hardness, friability, and disintegration time. The data was evaluated theoretically based on the requirement needed and then was analyzed statistically used one way ANOVA followed by Scheffe-test ($p = 0.05$).

The result showed that jackfruit seed pregelatinized starch had larger reposed angle, smaller tapping index, lower moisture content, lower compactibility compared with the nature starch and the granule density was similar with the nature starch statistically. Larger particle size of jackfruit seed pregelatinized starch resulted higher reposed angle, granule density, and the compactibility value but smaller tapping index. Therefore, they performed more uniform tablet weight, with higher hardness and longer disintegration time. Yet, the pregelatinized jack fruit starch with the size number 16, 20, 30, and 40 mesh had not been recommended to be used as the filler-binder of acetosal tablet because the values of the physical property were still under qualification.

Keyword : pregelatinized starch, particle size, filler-binder, direct compression tablet.